

AQUALAB

Dive computer

Owner's manual



WARNING!!

Read this manual in its entirety, before using your **AQUALAB**.
Failure to follow the instructions it gives, or to heed the warnings it provides, can lead to
serious personal injury or death.

AQUALAB Dive Computer

- The **AQUALAB** dive computer uses the decompression theory modified by Mr. C. Randy Bohrer (of UNDERWATER APPLICATIONS CORP) based on the research of Dr. A. A. Buhlman. It is intended for use by persons who have completed an officially authorized scuba diving course. It is not intended for persons who have not received scuba training or for persons who are not aware of the hazards and risks associated with scuba diving.
- The **AQUALAB** dive computer can be used for **NITROX** diving in which the tank's gas mixture can be adjusted. However, persons who lack expertise or training in **NITROX** diving should avoid using **NITROX**. Note also that it is very hazardous when the gas mixture in the tank is set as different from the dive computer's mixture setting. Be sure to check the settings before each dive and do not dive with settings that differ from the dive computer's gas mixture setting.
- The **AQUALAB** dive computer is designed for use in recreational diving and is not designed for professional diving.
- These specifications apply to no decompression diving. Information concerning decompression diving is also provided for safety reasons, but use of this product for decompression diving is hazardous and should be avoided.
- The **AQUALAB** dive computer is basically designed for divers who are in generally good health and have average physical strength. Accordingly, each individual diver is responsible for ensuring the safety of his or her diving schedule and diving activities.
- The **AQUALAB** dive computer is designed to be used by its owner as a personalized device. Therefore, the dive computer owner should not lend this product to another diver during a series of dives unless it has been fully reset (zero values for Desaturation Time and residual nitrogen level).

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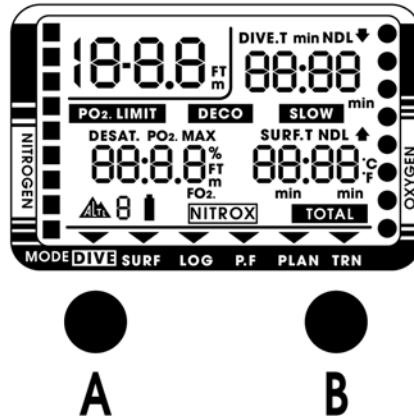
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Aqualab Limited Warranty

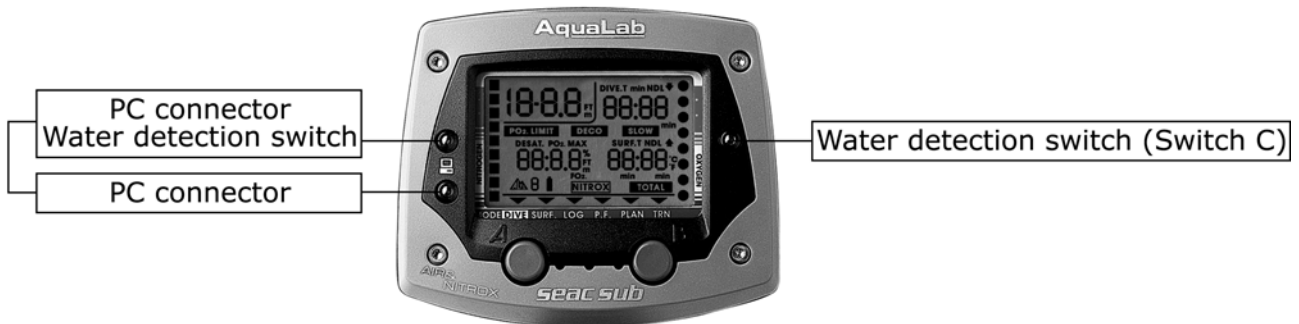
- **Seac Diving Pro** – at its sole discretion - repair or replace AQUALAB system components proved to be damaged by faulty manufacture or material, at no cost, for a period of up to **two years** (730 days) from the date of purchase.
- This warranty applies only to the original retail purchaser. It does not cover commercial or rental use, nor does it extend to units purchased from other than an authorized **Seac Diving Pro** dealer.
- This warranty specifically excludes battery depletion or other conditions resulting from misuse, negligence, alteration, accident or unauthorized repair.
- To make a claim under this **warranty**, the owner must have the **warranty card** included with the AQUALAB dive computer together with the receipt or invoice. He or she must then return the damage items to **Seac Diving Pro**, along with a copy of the original purchase invoice or receipt. No warranty service will be performed unless the above requirements are completed.
- This warranty becomes void if the **AQUALAB** system components are damaged by anything other than normal recreational diving use, or if they have been serviced or repaired by other than authorized **Seac Diving Pro** dealers.
- Repairs made under this warranty will not extend the warranty period.
- All further claims, especially for damage after diving accidents, are excluded from coverage under this warranty.
- **Seac Diving Pro** has a no obligation to honour any extension of this warranty.

Aqualab Dive computer

Buttons, Switches, display



- **Button A** Left side
- **Button B** Right side



Switch C

Right side - Water detection switch "dive mode".

Above Switch*

Left side - Water detection switch "dive mode".

Below Switch

Left side - P.C. Connector

* When in "Transfer Mode" this switch is able to connect with the P.C. (see page 20).

- **Indication Mode.**

The arrow turned downwards indicates the function mode in operation. It positions itself marking its present function (example: arrow on "Dive Log Mode").



Arrow on DIVE	Dive Mode
Arrow on SURF	Surface Mode
Arrow on LOG	Dive Log Mode
Arrow on P.F.	Profile Mode
Arrow on PLAN	Dive Plan Mode
Arrow on TRN	Transfer Mode

- **No decompression limit (in "air", "Nitrox 32", "Nitrox 34").**

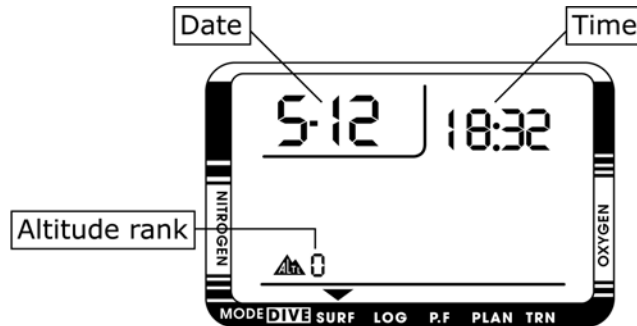
DEPTH	AIR No decompression limit	EAN 32 No decompression limit	EAN 36 No decompression limit
9 meters	200 minutes	200 minutes	200 minutes
12 meters	104 minutes	200 minutes	200 minutes
15 meters	66 minutes	117 minutes	182 minutes
18 meters	47 minutes	74 minutes	92 minutes
21 meters	35 minutes	55 minutes	65 minutes
24 meters	25 minutes	41 minutes	50 minutes
27 meters	19 minutes	32 minutes	38 minutes
30 meters	16 minutes	24 minutes	30 minutes
33 meters	13 minutes	19 minutes	23 minutes
36 meters	11 minutes	16 minutes	- - -
39 meters	9 minutes	14 minutes	- - -
42 meters	8 minutes	- - -	- - -
45 meters	7 minutes	- - -	- - -
48 meters	7 minutes	- - -	- - -

The symbol "---" indicates that the limits set in the AQUALAB concerning the oxygen toxicity risks have been exceeded.

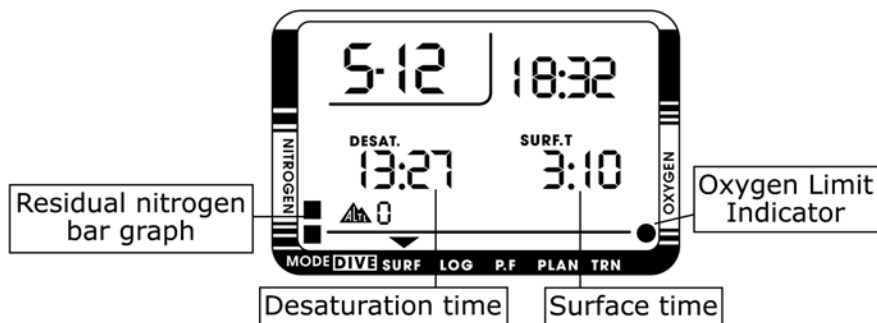
No datum is therefore displayed for safety reasons.

Surface Mode

NORMAL DISPLAY



DISPLAY ON SURFACE AFTER DIVE



Operation of switches (Beginning from Surface Mode)

- Switch A
Press this switch to set **dive plan mode**.
- Switch B
Press this switch to set **dive log mode**.
- Switch C (Water detection switch)
When water is detected, the computers switch to **dive mode** automatically.
- Switches A + B
Press and hold these two switches for at least five seconds to switch to **time setting mode**.

Note: Press and hold **A** first, then press and hold **B** also.

Description of functions

The following functions are available during normal mode and surface mode.

- **Date**

This shows the current date.

- **Current time**

This shows the current time (colon blinks).

- **Altitude rank**

The computer automatically measures the current altitude and uses the rank symbols described below to indicate the altitude range.

Measurements are retaken every 10 minutes.

RANGE	ALTITUDE RANGE		
0	From 0,0 meters Sea Level	To 800 meters	
1	From 800 meters	To 1600 meters	
2	From 1600 meters	To 2400 meters	
3	From 2400 meters	To 6000 meters	
E	Above 6000 meters	"out of Range"	

RANGE	ALTITUDE RANGE		
0	From 0,0 Ft. Sea Level	To 2624 Ft.	
1	From 2624 Ft.	To 5248 Ft.	
2	From 5248 Ft.	To 7872 Ft.	
3	From 7872 Ft.	To 19680 Ft.	
E	Above 6000 Ft.	"out of Range"	

When the measured altitude is above 19,685 feet (6,000 meters), "E" is displayed and the dive computer cannot be used. The computer is reset and becomes usable again when a lower altitude is measured. If the computer contains data such as residual nitrogen and oxygen data, the calculations and displays in effect when the computer detects an altitude of more than 19,685 feet (6,000 meters) are **retained** while the computer is disabled and the retained values are restored when the measured altitude becomes less than 19,685 feet (6,000 meters). The same displays and processing occur in cases where the computer is somehow unable to measure the altitude.

Altitude measurements are performed in all modes except for **dive mode** and **time setting mode** and **transfer mode**.

The altitude rank symbol display is shown in all modes except for **time setting mode**, **dive log mode**, **profile mode**, and **transfer mode**. (However, the rank display is shown while in **dive mode**.)

- **Surface time**

This indicates the amount of time since ascending to the surface: the time counter starts when **dive mode** indicates a depth of less than 5 feet (1.5 meters). If the depth measurement becomes more than 5 feet (1.5 meters) within the first ten minutes of surface time, the previous dive mode operations are continued. The **Surface time** can be measured for up to 48 hours, 1 minute after which it is automatically turned off.

- **Residual nitrogen bar graph**

This **bar graph** contains **9 level** indicators corresponding to the calculated amount of residual nitrogen in the body. A greater number of displayed indicators indicates a higher level of residual nitrogen.

- **Desaturation time**

This indicates the amount of time until residual nitrogen is saturated. This display is shown until the displayed value reaches 0:00, and the display is shut off 1 minute afterward.

- **Oxygen Limit Indicator (OLI)**

This **bar graph** contains **8 level** indicators corresponding to the amount of oxygen toxicity exposure level in the body. A greater number of displayed indicators indicates a higher level of oxygen toxicity exposure level.

- **Battery indicator**

The battery symbol indicates the battery's current voltage level. When symbol blinks, the **AQUALAB** will not enter **dive mode**, but can enter **transfer mode**. When battery symbol stays ON, the dive computer cannot enter **dive mode** or **transfer mode**. Battery level measurements are made automatically in all modes except **dive mode**.



CAUTION !!!

- **Residual nitrogen bar graph indicators** may be shown when the altitude changes even though there is no residual nitrogen.
In addition, a Surface time may be shown and then reset.
- Do not touch or adjust the **water detection switch** when in situations where the air pressure may change rapidly (such as when flying in an airplane).
- When the **residual nitrogen level** is high (seven or eight level indicators), changes in altitude rank may cause the residual nitrogen level to increase to nine level indicators. In such cases, the **AQUALAB** is disabled from entering **dive mode** for safety's sake. It can be reset to dive mode after the residual nitrogen level has returned to eight or fewer level indicators.
- A one-minute margin of error may occur between the residual nitrogen level and the residual nitrogen off-gassing time.
- The battery life indicator is a battery symbol. When this symbol is displayed (as blinking) the battery is low and should be replaced.
- Replacing the battery will erase all log data. Therefore, be sure to transfer log data to a logbook or PC before replacing the battery.

Dive Plan Mode



Operation of switches

(beginning from Dive Plan Mode)

- **Switch A**
Use this switch to set the depth rank. The number scrolls from shallower to deeper. If you press this switch when the display shows 157 feet (48 meters), the **AQUALAB** display returns to **surface mode**.
You can also return to **surface mode** by pressing and holding this switch for at least two seconds.
- **Switch B**
This switch has no function in **dive plan mode**.
- **Switch C (Water detection switch)**
When water is detected, the computer switch to **dive mode** automatically.
- **Switches A + B**
If you press these two switches for at least five seconds, the computer switches to **oxygen mix ratio-setting mode**.
This function is disabled during the first ten minutes of Surface time.
- **Auto return**
If no switches are pressed for five or six minutes, the dive computer switches to **surface mode**.

Description of functions

The functions of the dive plan mode are further described below.

- **Depth rank and no decompression limit**

This mode displays a depth rank corresponding to the planned dive depth.

The depth rank is indicated by the 14 rank level indicators shown below.

This makes it possible to check the no decompression limit for the first dive or for a series of dives.

The no decompression limit indicator displays up to 200 minutes

9 Meters	200 Minutes	30 Meters	16 Minutes
12 Meters	104 Minutes	33 Meters	13 Minutes
15 Meters	66 Minutes	36 Meters	11 Minutes
18 Meters	47 Minutes	39 Meters	9 Minutes
21 Meters	35 Minutes	42 Meters	8 Minutes
24 Meters	25 Minutes	45 Meters	7 Minutes
27 Meters	19 Minutes	48 Meters	7 Minutes

30 Ft.	200 Minutes	98 Ft.	16 Minutes
39 Ft.	104 Minutes	108 Ft.	13 Minutes
49 Ft.	66 Minutes	118 Ft.	11 Minutes
59 Ft.	47 Minutes	128 Ft.	9 Minutes
69 Ft.	35 Minutes	138 Ft.	8 Minutes
79 Ft.	25 Minutes	148 Ft.	7 Minutes
89 Ft.	19 Minutes	157 Ft.	7 Minutes

CAUTION !!!

Be sure to set a dive plan that leaves a margin beyond the displayed no decompression limit.

- **Residual nitrogen bar graph**

Indicates the current residual nitrogen level.

- **Oxygen Limit Indicator**

Indicates the current level of oxygen toxicity exposure.

- **Surface time**

Indicates the elapsed time since surfacing. The time counter starts when **dive mode** indicates a depth of less than 5 feet (1.5 meters). If the depth measurement **becomes** more than 5 feet (1.5 meters) within the first ten minutes of Surface time, the previous **dive mode** operations are continued.

The Surface time can be measured for up to 48 hours, one minute after which it is turned off.

- **FO₂**

This indicates the current setting for the oxygen mix ratio (the percentage of oxygen in the nitrox mix). These settings are displayed as shown below.

Setting	Display
21%	Air
22% to 50%	Percentage is displayed
Default	" - - "

Note:

The **default** settings are 99% oxygen and 79% nitrogen. After **NITROX** diving using a setting of 22% to 50%, the setting automatically switches to the **default** setting after 10 minutes of Surface time or after 18 hours following completion of the setting. This is convenient in cases where the diver forgets to set the mix for the next dive. The setting does not switch automatically after **air** diving.

CAUTION !!

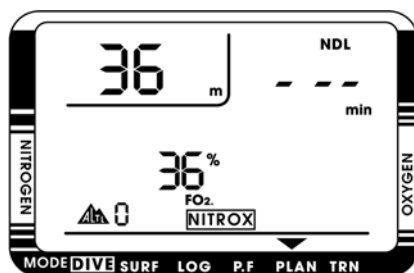
Be sure to set the oxygen percentage before each dive.

- **Maximum depth corresponding to FO₂**

The maximum allowable depth for a dive is determined based on the FO₂ setting. (For details, see the appendix.) If the depth rank exceeds the maximum depth, the no decompression limit indicator changes to " - - -".

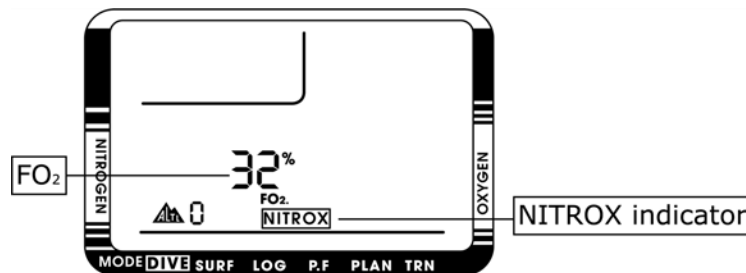
(- - -)

<When 36%>



Oxygen mix ratio setting mode

This mode is disabled during the first ten minutes of Surface time and during the dive.



Operation of switches

(beginning from "Surface Mode")

- **Switch A**
Press this to switch or to return to **dive plan mode**.
When in **dive plan mode**, "30 feet" ("9 m") is displayed as the depth rank.
- **Switches A + B**
In **dive plan mode** press and keep pressing switch A then press and keep pressing switch B for at least 6 seconds in order to enter function **oxygen mix ratio setting mode**.
- **Switch B**
Press this switch to increase the currently set oxygen mix ratio in 1% steps. When this setting exceeds 50%, the mode automatically switches to **Air** mode.
- **Switch C (Water detection switch)**
When water is detected, the computer switch to **dive mode** automatically.
- **Auto return**
The **AQUALAB** dive computer automatically switches to **surface mode** if no switches are pressed for about 1 or 2 minutes.

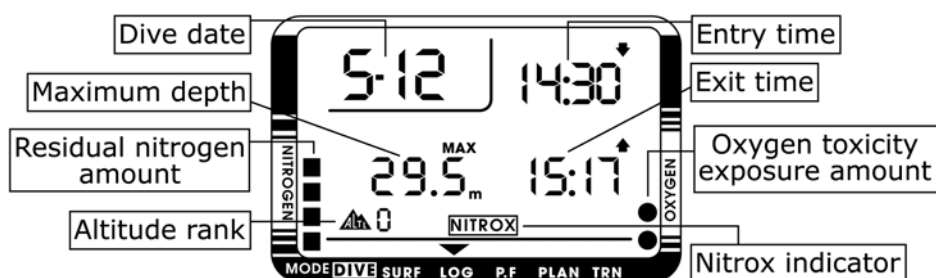
Description of functions

The functions of the oxygen mix ratio setting mode are further described below.

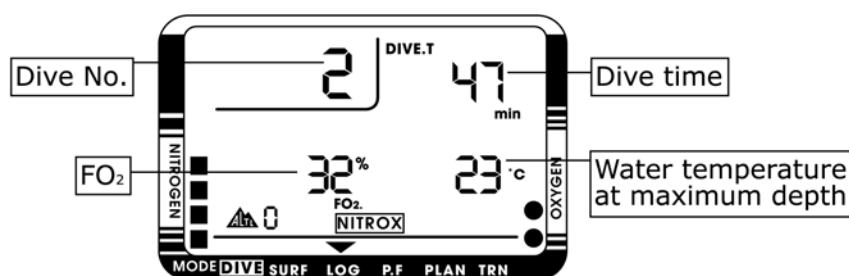
- **FO₂**
Values can be set from 21% (**Air**) to 50% in 1% steps.
When the current setting is between 22% and 50%, the **NITROX** indicators are shown.

Dive Log Mode

display 1



display 2



Display 1

- Dive date: Date of dive
- Entry time: Time at start of dive
- Exit time: Time at end of dive
- Maximum depth: Bottom depth measurement during current dive

Display 2

- Log n°: Log number on dive date
- Dive time: Elapsed dive time
- FO₂: Oxygen mix ratio setting for current dive. This ratio is set via the oxygen mix ratio setting functions.
- Water temperature At maximum depth: Temperature of water when at maximum depth

N.B

When below 23F (-5°C): **Lo**

When above 104F (40°C): **Hi**

CAUTION !!!

Replacing the battery will erase all log data. Therefore, be sure to transfer log data to a logbook or PC before replacing the battery.

Operation of switches

(beginning from "Dive Log Mode")

- **Switch A**

Press this switch to toggle between **Display 1** and **Display 2**. If you press and hold this switch for about four or five seconds, log data from the current log is called up and the mode switches to **profile mode**.

- **Switch B**

Press this switch to call up log data, beginning with the most recent data. Pressing this switch while the oldest data is shown returns to **surface mode**.

Pressing this switch for at least two seconds also returns to **surface mode**.

- **Switches A + B**

Press and hold these two switches to switch to **transfer mode**.

- **Switch C (Water detection switch)**

When water is detected, the computer switch to dive mode automatically.

- **Auto return**

The dive computer automatically switches to **surface mode** if no switches are pressed for about five or six minutes.

Description of functions

These functions record various data once the diver has descended at least 5 feet (1.5 meters) and has been diving at least three minutes. Log data for up to ten dives can be sequentially recorded and retained. Data recorded after the tenth dive replaces the earliest log data. (See the **profile mode** description for information concerning the relation between the log data and the profile data.)

The log data includes the following:

- **Residual nitrogen amount:**

This indicates the residual nitrogen level at the end of dive.

- **Oxygen toxicity exposure amount:**

This indicates the Oxygen toxicity exposure level at the end of dive.

- **Altitude rank**

This indicates the altitude rank during a dive.

- **NITROX indicator**

This indicator is **on** during a dive when oxygen mix ratio setting is between 22% and 50%.

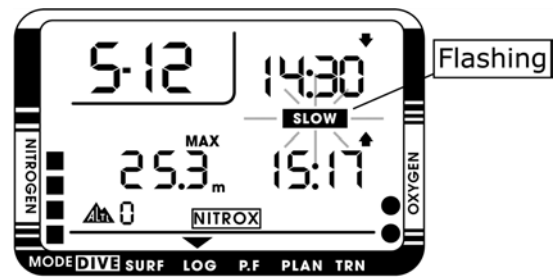
- **Warnings**

These warnings may appear during a dive.

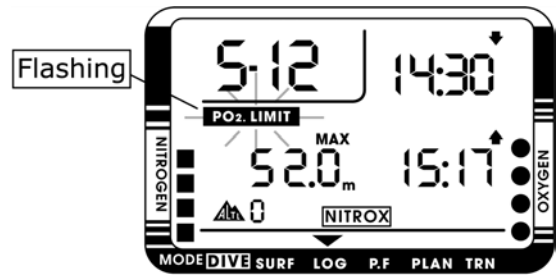
For details, see the **dive mode** description



Decompression stop violation warning



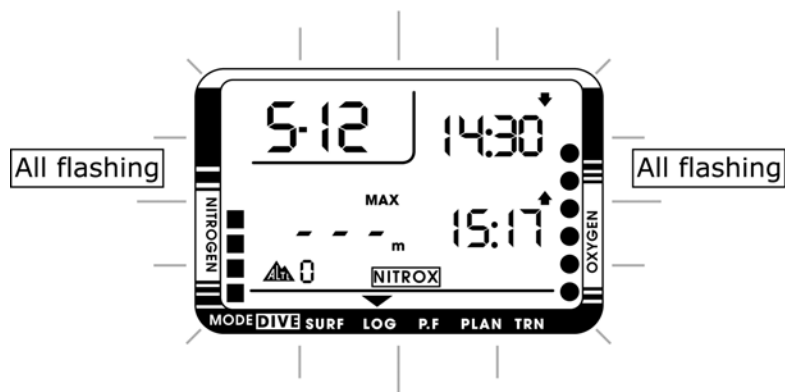
Ascent rate warning



Maximum depth warning

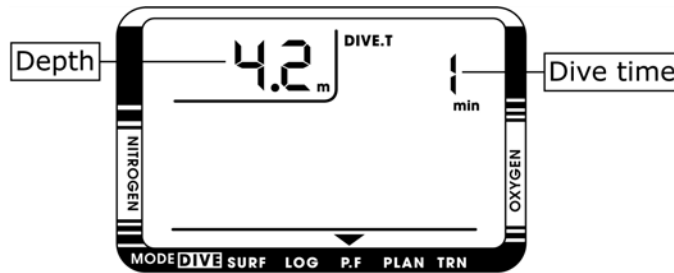


Oxygen toxicity exposure level warning



Out of measurement range warning

Profile Mode



Operation of switches

(beginning from "Dive Log Mode")

- **Switch A**
Beginning from **dive log mode**, if you press and keep pressing this switch for at least 6 seconds you enter function **profile mode**.
Press this switch to display the next minute of dive profile data.
After the most recent minute of data is displayed, pressing this switch causes the earliest minute to be displayed again.
- **Switch B**
Press this switch to return to **dive log mode**.
- **Switches A + B**
Press and hold these two switches for about four or five seconds to switch to **transfer mode**.
- **Switch C (Water detection switch)**
When water is detected, the computer switch to **dive mode** automatically.
- **Auto return**
The **AQUALAB** automatically switches to **dive log mode** if no switches are pressed for about 5 or 6 minutes.

Description of functions

This function calls up the dive profile and displays the current profile data. Profile data is recorded at 1 minute intervals and the profile data capacity is about 30 hours.

CAUTION !!

The following restrictions apply to log data and profile data.

Address	----->	Maximum memory: 30 hours
0		
1	2	3
4	5	6
7	8	9
10	etc.	

When the log capacity is exceeded

Address	----->	Maximum memory: 30 hours
0		
1	2	3
4	5	6
(7)		
*1	*2	

In the second example above, if the seventh log entry **exceeds the 30 - hour** log capacity, the profile returns to address 0 and begins overwriting the previous log data.

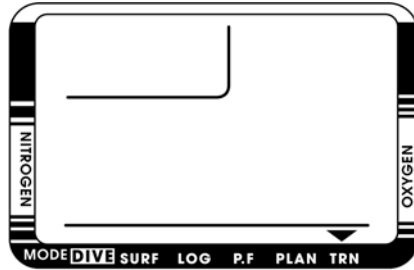
This means that the old data for log entry 1 is erased by the part of log entry 7 that exceeds the log capacity and fills addresses as far as "*1" in this example.

The oldest log data is now in log entry 2, and there are only six log entries instead of seven.

If log entry 7 fills addresses as far as "*2" in this example, both log entries 1 and 2 are erased by log entry 7, the oldest log data is now in log entry 3, and there are only 5 log entries.

Transfer Mode

This mode is disabled during the first ten minutes of Surface time.



Operation of switches

(beginning from "Profile Mode")

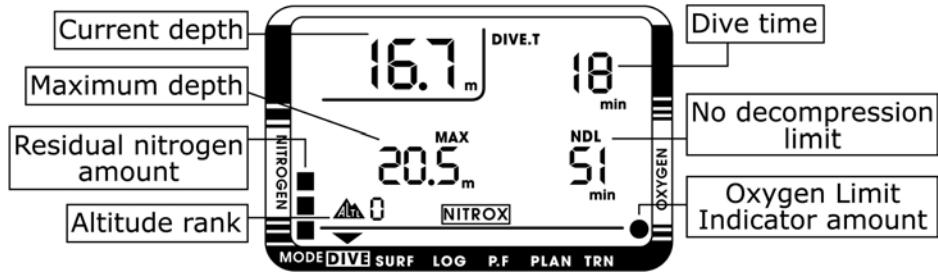
- Switch A
This switch is disabled when in this mode.
- Switch B
This switch is disabled when in this mode.
- Switches A + B
In **profile mode** press and keep pressing these two switches for 5-6 seconds in order to enter **transfer mode**.
Press and hold these two switches for about four or five seconds to return to **dive log mode**.
- Switch C (Water detection switch)
This switch is not for Water detection switch, but for transfer connection when in this mode.
- Auto return
The AQUALAB automatically switches to **dive log mode** if no switches are pressed or no data is transferred for about nine or ten minutes.

Description of functions

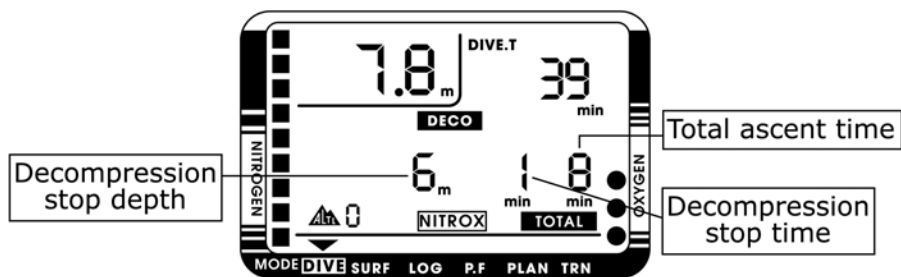
Use this mode to transfer log data and profile data from the **AQUALAB** dive computer to a personal computer P.C.

- After switching to **transfer mode**, attach the separately sold transfer tool and run the PC's transfer software to transfer data from the **AQUALAB** dive computer to a PC.
- For description of the transfer tool setup and PC software operations, see the documentation that comes with the separately sold transfer tool.

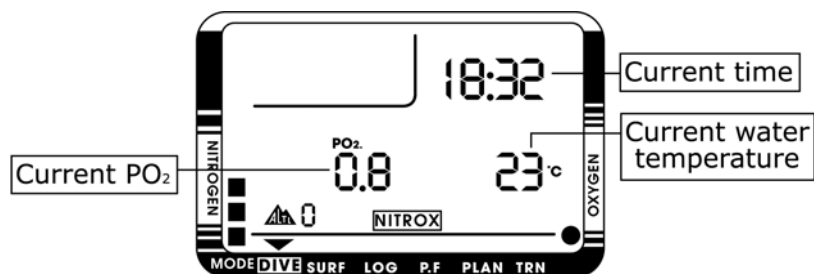
Dive Mode



No decompression mode



Decompression mode



While switch A is pressed

Operation of switches

- **Switch A**
Press this switch to display the current time, current water temperature, and current PO₂ for as long as the switch is pressed.
- **Switch B**
This switch is disabled during this mode.
- **Switch C (Water detection switch)**
When depth is less than 5 feet (1.5 meters) and when water is not detected, the **AQUALAB** dive computer switch to **surface mode** automatically.

Description of functions

This mode shows various data during a dive.

The two main displays in this mode are the **no decompression** dive mode display and the **decompression** dive mode display.

The functions belonging to each of these displays are described below.

Common items

Current depth:

This shows the current depth.

The display is "0 ft"("0.0 m") when measured depth is less than 5 feet (1.5 meters).

The depth measurement is retaken at 1 second intervals.

Dive time:

This shows the amount of elapsed time since descending below 5 feet (1.5 meters).

The time counter stops when measured depth is again less than 5 feet (1.5 meters).

Altitude rank:

This indicates the altitude rank at the start of the current dive.

Residual nitrogen amount:

This indicates the current residual nitrogen level.

Oxygen Limit Indicator amount:

This indicates the current Oxygen toxicity exposure level.

- **No decompression dive mode**

The following data applies to dives that do not exceed the no decompression limit.

- **Maximum depth:**
This shows the maximum depth measurement since the start of the dive.
- **No decompression limit:**
This shows the maximum amount of time allowable at the current depth with no decompression, calculated based on dive data so far.

- **Decompression dive mode**

The following data applies to dives that exceed the no decompression limit.

- **Decompression stop depth:**
Decompression stop depths include 49 feet (15 meters), 39 feet (12 meters), 30 feet (9 meters), 20 feet (6 meters), and 10 feet (3 meters).
The stop depths are set according to the current dive data and are shown in a sequence from deepest to shallowest.
- **Decompression stop time:**
This shows the amount of decompression time at each decompression stop depth, calculated based on the current dive data.
The amount of decompression time is counted down at each decompression stop depth.
- **Total ascent time:**
This shows the total amount of time required for ascent to the surface, calculated based on the decompression stops and an ascent rate of 24 feet per minute (8 meters per minute).*

*For further information on the different ascent rates see page 25

The display alternates between decompression stop time and total ascent time when the total ascent time becomes a three-digit value while the decompression stop depth remains unchanged.

When switch A is pressed

- **Current time:**
The current time is displayed.
- **Current water temperature:**
The current water temperature is displayed.
The temperature measurement is retaken at 1 minute intervals.
- **Partial pressure of oxygen (PO₂):**
The partial pressure is displayed at the current depth.
This value is calculated based on the oxygen mix ratio setting and the current depth.
Never allow this value to exceed **1.6 ATA** during a dive.

Note:

1.6 ATA has been established as the maximum PO₂ value for safe diving.
In this manual, the depth setting that causes this value to approach **1.6 ATA** is defined as the **maximum depth for a dive**.

The following warning functions are also provided for when hazards are encountered during a dive.

- **Default warning**
When the oxygen mix ratio is at the **default setting**, an alarm is sounded if the dive computer is set to dive mode.
When this alarm is sounded, **do not start a dive** until you have set an appropriate oxygen mix ratio via the oxygen mix ratio setting mode.
The alarm sounds for three seconds.
This warning is not recorded in the dive log.
- **Decompression warning**
This display appears and an alarm is sounded for three seconds if the no decompression limit **is exceeded** and the dive mode changes to decompression dive mode.
(The dive computer's display changes to decompression dive mode.)
The alarm sounds for three seconds and the warning display blinks for ten seconds, (see page 25) .
This warning is recorded in the **dive log**.

- **Ascent rate warning**

This display appears and an alarm is sounded if the maximum safe ascent rate for the current depth is exceeded.

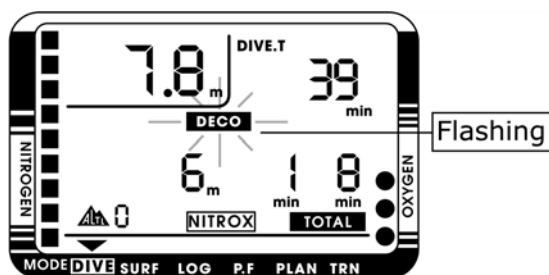
The alarm display continues until a safe ascent rate is achieved or until the depth becomes less than 5 feet (1.5 meters).

The alarm sounds for three seconds while the warning display (**SLOW**) and the depth rank blink for five seconds.

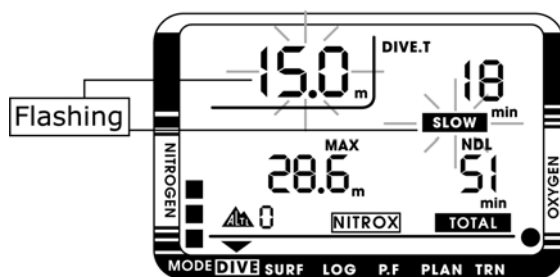
This warning is recorded in the dive log.

Ascent rates for various depths are listed below:

DEPTH		ASCENT RATE
0 to 20 feet	(0.0 to 5.9 meters)	26 feet (8 meters) per minute
20 to 59 feet	(6.0 to 17.9 meters)	39 feet (12 meters) per minute
59 feet	(18.0 meters) or more	52 feet (16 meters) per minute



Decompression Mode



Ascent rate warning

- **Partial pressure warning:**

The maximum depth is calculated based on the **oxygen mix ratio setting**.

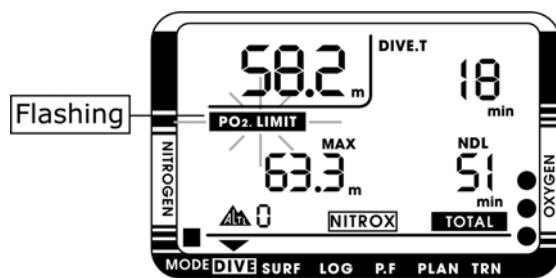
(For details, see the appendix).

When a certain portion of the maximum depth value has been exceeded, the warning (**PO₂ LIMIT**) is displayed and an alarm is sounded.

This warning is recorded in the **dive log**.

The warning setting and alarm operate at the stages described below:

- Current depth value is at least 90% of maximum depth value (based on partial pressure): The alarm sounds for three seconds and the warning display (**PO₂ LIMIT**) blinks for three seconds.
- Current depth value is equal to or greater than maximum depth value (based on partial pressure): The alarm sounds for three seconds and the warning display (**PO₂ LIMIT**) blinks and continues blinking until the current depth is shallower than the maximum depth.



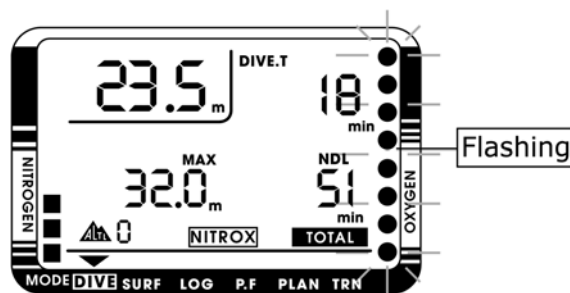
Partial pressure warning

- **Residual oxygen level warning**

An alarm is sounded when the residual oxygen level reaches **seven** or **eight** level indicators on the bar graph display.

There are two kinds of warnings, as described below:

- Warning when **7 level** indicators are displayed:
The alarm sounds for three seconds and the warning display blinks for three seconds.
This warning **is not recorded** in the **dive log**.
- Warning when **8 level** indicators are displayed:
The alarm sounds for three seconds and the warning display blinks and continues to blink until seven or fewer level indicators are displayed. (see page 27).
This warning **is recorded** in the **dive log**.



Residual oxygen level warning

CAUTION !!

During a NITROX dive, the effects of oxygen on the body varies according to the maximum dive depth based on the oxygen mix ratio setting and the amount of dive time spent within the maximum depth range.

Accordingly, when a partial pressure warning or residual oxygen level warning occurs, the diver should rapidly move to a safe dive depth.

Remaining at the same depth after either of these warnings occurs is hazardous and definitely should be avoided.

• Decompression stop violation warning

This display appears and an alarm is sounded (for three seconds) if the current depth is shallower than the decompression stop depth.

This warning stops when the current depth is again deeper than the decompression stop depth.

The warning continues if the current depth remains shallower than the decompression stop depth. Five minutes after surfacing, this warning automatically stops and the computer is not usable.

After 48 hours, the computer automatically switches to **surface mode**.

This warning is recorded in the **dive log**.

CAUTION !!

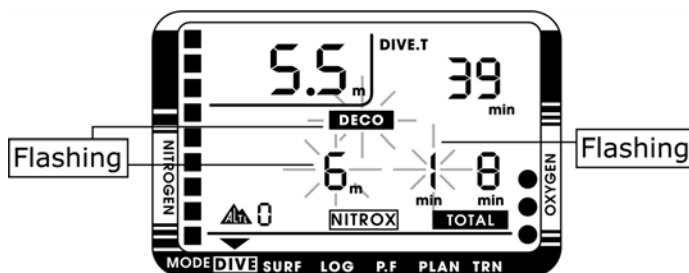
Be sure to perform the decompression stops at the indicated depths.

Definitely avoid ascending to depths that are less than the indicated depths.

If underwater conditions prevent this, perform decompression stops at depths between 3 and 7 feet (1 and 2 meters).

The decompression stop times are longer at these shallower depths.

If a decompression stop violation warning is displayed, remember that the decompression stop times and total ascent time are to be used as a **basic guide**.



Decompression stop violation warning

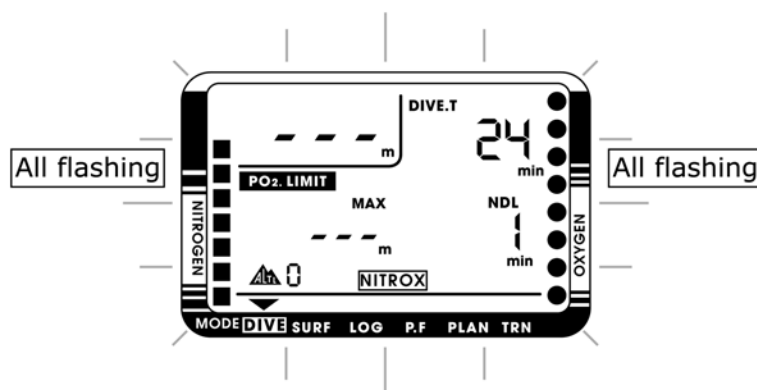
- **Out of measurement range warning**

This display appears and an alarm is sounded (for ten seconds) if any of the following three types of out of measurement range conditions occur.

- **The current water depth exceeds the measurement range.**
- **The dive time exceeds 599 minutes.**
- **Decompression is required at a decompression stop depth greater than 49 feet (15 meters).**

When a measurement range has been exceeded, the corresponding display shows a blinking dash (- - -) and the warning is recorded in the **dive log mode**.

After surfacing, the **AQUALAB** dive computer cannot be used for 48 hours, after which it returns to **surface mode**.



Out of measurement range warning

CAUTION !!

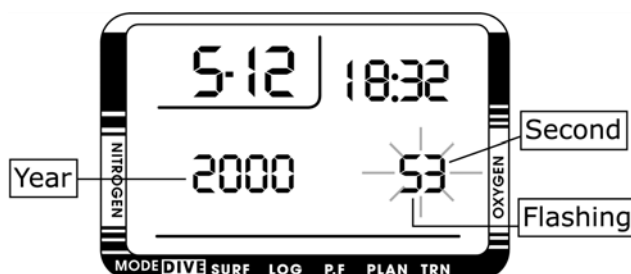
If a decompression stop violation warning is displayed, remember that the displayed decompression stop times and total ascent time are to be used as a basic guide.

Once this warning is displayed, other warnings (such as an ascent rate warning) are not shown.

Therefore, be extra careful when ascending, and **be sure to avoid out-of-range conditions in future dives.**

Time setting mode

This mode is not displayed during the first ten minutes of Surface time



Operation of switches (beginning from "surface mode")

- **Switches A + B**
From **surface mode** press and keep pressing these two switches for at least 5 seconds in order to enter function **time setting mode**.
- **Switch A**
Press this switch to cycle through the column settings (cycle: hours → minutes → seconds → year → month → date). Press this switch while the column is set to "date" to return to **surface mode**.
- **Switch B**
Press this switch to scroll the numbers in each column.
Press and hold for fast scrolling.
- **Switch C (Water detection switch)**
When water is detected, the computer switches to **dive mode** automatically.
- **Auto return**
The **AQUALAB** dive computer automatically switches to **surface mode** if no switches are pressed for about five or six minutes.

Description of functions

This mode includes functions for changing the current time, date, or year settings.

- **Current time**

The current time (hour and minute only; seconds are shown only during **time setting mode**) is shown in **24-hour format**.

- **Current month, date and year**

The current month, date and year are shown based on a fully automatic calendar that starts on January 1, 1997 and ends on December 31, 2050.

Aqualab specifications

Clock precision	Accurate to within +/- 30 seconds per average month
Water depth precision	+/- 3%
Temperature precision	+/- 4° F (2° C)
Water depth measurement	Range is 0 to 328 feet (0 to 99,9 meters)
Dive depth control	Interval is one second
Dive time measurement	Range is 0 a 599 minutes
Altitude measurement	Range is 0 to 19,685 Feet. (6.000 meters)
Altitude measurement control	Interval is 10 minutes. All modes except Dive mode and Time set mode
Water temperature measurement	Range is 23°F to 104°F (-5° C to +40° C.)
Operating temperature range	23°F to 104°F (-5° C to +40° C.). Display appears faded when at low temperatures.
Temperature control	Interval is 60 seconds
Water resistance	Up to 328 feet (100 meters).
Battery life.	7 years note: calculated based on 50 dives (1 hour each)per year, with one ten-second alarm output per dive,

Warning!!!

Battery life is always approximate anyway.

Several reasons can influence the battery life (environmental conditions, continuous use of surface functions (Dive-Log, Planning, Transfer mode, etc. etc.), wet contacts.

Change mode of measurement units

This product's switches can be used to change the following units of measurement for depth and water temperature.

- Change water depth unit from **meters to feet**
The display range is 0 to 328 feet.
- Change temperature units from **Centigrade to Fahrenheit**.
The display range is 23 °F to 104 °F.

The calculations are performed in **metric and centigrade units** and are then converted to **feet and Fahrenheit units** for display.

- **How to change measurement units**

CAUTION !!!

Measurement units must be changed by the manufacturer only.
To instruct users in how to change the measurement units is prohibited by law.

For further information:

Seac Diving Pro S.r.l

Tel. +39 0185 356301

Fax. +39 0185 356300

WEB <http://www.seacsub.com/>

e-mail <mailto:seacsub@seacsub.com>

Cautions related to product handling

Be sure to read the User's Manual before using the **AQUALAB** dive computer.

- Do not store or place this product in hot and humid environments, which may impair its functions.
The pressure sensor function is particularly sensitive to such environments, and, if impaired, it may cause incorrect altitude ranks or water depth values to be displayed. Dip the computer in water or use other means to cool it when in hot and humid locations.
- The LCD panel may darken if the computer is left for a long period in a hot environment, but will return to normal in a cooler environment. However, avoid keeping the **AQUALAB** dive computer in hot environments as such darkening can shorten the life of the LCD panel.
- Note with caution that weather-related changes in air pressure can cause incorrect altitude rank displays.
- Do not use the **AQUALAB** dive computer for pressure chamber tests using air or gas as such conditions may impair sensor accuracy.
- This product is not to be disassembled by users. Such disassembly voids the warranty.

Battery

- Once the battery indicator starts blinking, record the log data or PC and promptly have the battery replaced.
A battery that has been depleted and is left in the computer for a long period may leak, which is another reason to have the battery replaced promptly.

Diving-related cautions

- Be sure to check the battery indicator before diving.
Some of the **AQUALAB** dive computer's functions may stop during a dive if the battery is low level.
The computer cannot be switched to **dive mode** if the battery indicator blinking.
- Leave a no decompression margin when diving.
If diving below 49 feet (15 meters), be sure to make safety stops at 10 to 20 feet (3 to 6 meter) intervals.
If a decompression stop display is shown, we recommend stopping a while longer than the displayed decompression time.
Be sure to check your air supply at each stop.
- This product does not monitor the air supply level.
Be sure to monitor the air supply level yourself during each dive.
- When using this product, be sure to take along other devices (such as another dive computer, water depth gauge, or diver's watch) as back-up devices.
- Even after a dive, the decompression calculation is still based on the altitude rank.
Avoid undergoing sudden changes in altitude level soon after diving, as such changes can be **very dangerous**.

Care and maintenance by user

- Be sure to rinse the **AQUALAB** dive computer in fresh water after diving.
Do not leave the computer immersed in water for a long period as it may shorten the battery life.
Do not use cleansers or other chemicals to clean the computer.
Instead, use a soft cloth to gently wipe dirt or water stains from the dive computer.
- The plastic display cover can be damaged (and water resistance can be impaired) if exposed to solvents such as alcohol or gasoline, cosmetic products such as hair spray or liquid soaps, adhesives, paints, alkaline substances, aromatic hydrocarbon solvents, or halogenated hydrocarbon solvents.
Such damage can reduce the device's waterproof performance.
- Store the **AQUALAB** dive computer in a cool, dry location.
After a dive, wipe the dive computer dry and store it separately from items that are still damp.
Do not store it in a potentially hot location, such as on a car dashboard or other direct-sunlight locations. Also, **avoid** storing it in extremely cold environments.
If you find the dive computer has been sitting in a very hot or humid location, immerse it in tepid water until it cools to about room temperature.
Do not use the dive computer immediately after it has been kept in an extremely hot or cold environment, as such use not only may result in inaccurate data (for water depth, altitude rank, water temperature, etc.) but may also permanently damage the dive computer.
- If ever the dive computer does not appear to be working correctly, do not use it—instead, send it promptly to the Seac Diving pro s.r.l for repair.

Troubleshooting

The following list includes diagnostic tips for when the dive computer appears to be malfunctioning.

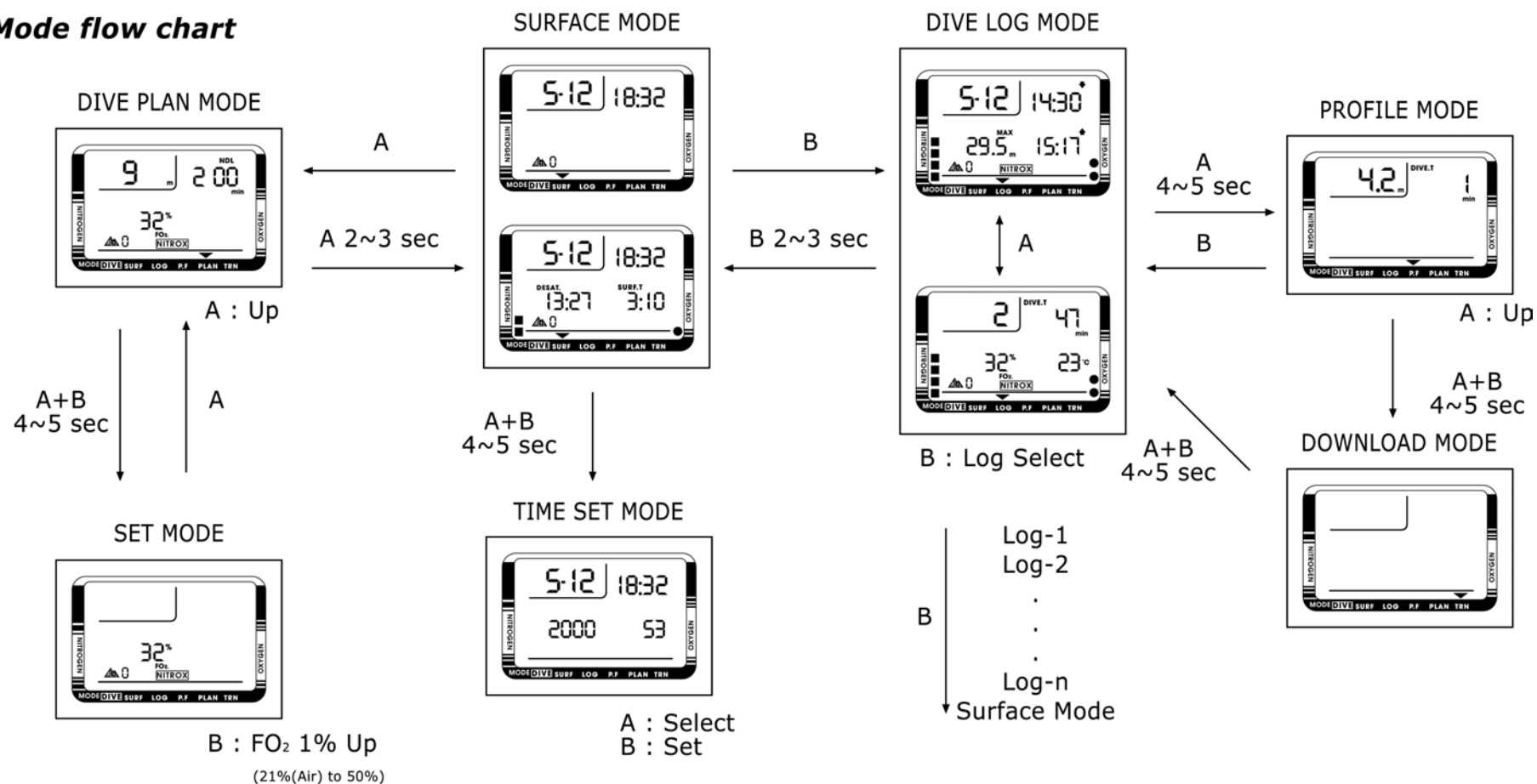
Contact the Seac Diving Pro s.r.l regarding any problems that are not included in this list.

PROBLEM	CAUSES – PREVENTION - RESPONSE
DECO mark, decompression stop step, and decompression stop time displays blink when at surface	<ul style="list-style-type: none"> This is caused by a decompression stop violation warning. If less than five minutes have elapsed at the surface, return to the displayed decompression stop depth. If more than five minutes have elapsed at the surface, the AQUALAB dive computer will be unusable for 48 hours, after which it is automatically reset
All displays blink when at surface	<ul style="list-style-type: none"> This is caused by an out of measurement range warning. The dive computer will be unusable for 48 hours, after which it is automatically reset.
The altitude rank symbols keep "E" even though the dive computer is within the altitude measurement range. (0,0 to 6.000 meters).	<ul style="list-style-type: none"> This is a malfunction. Send the dive computer to the Seac Diving pro s.r.l for repair.
The altitude rank display keeps changing.	<ul style="list-style-type: none"> This occurs when the altitude measurement is near the borderline between ranks. It is not a malfunction. This may also occur when the dive computer is in a very hot environment. Cool off the dive computer, such as by immersing it in water. If neither of the above applies, there may be a malfunction. Send the dive computer to the Seac Diving Pro s.r.l for repair.
Some data has already been recorded in the dive log .	<ul style="list-style-type: none"> That data is left over from the chamber tests that were conducted at the factory before shipping the product.
The display contents are faded.	<ul style="list-style-type: none"> Such fading can occur in low-temperature environments. Returning the dive computer to a warmer environment should solve the problem. It may also mean that the battery level is low. Have the Seac Diving pro s.r.l replace the battery.
The computer will not switch to dive mode .	<ul style="list-style-type: none"> This occurs when a decompression stop warning or out of measurement range warning has been displayed. The computer will reset itself automatically after 48 hours. It also occurs when the battery life is used up and the low battery indicator is blinking. Have the Seac Diving pro s.r.l replace the battery. When diving at a high altitude, this may occur if the altitude rank symbols are "E". The computer will reset itself when it is back at a lower altitude.

The computer will not switch to dive mode .	<ul style="list-style-type: none"> • If none of the previous apply, there may be a malfunction. • Send the dive computer to the Seac Diving Pro s.r.l for repair.
The AQUALAB dive computer does not return to surface mode after a dive.	<ul style="list-style-type: none"> • This occurs when the water detection switch area is still wet. Use a soft dry cloth to dry off the computer completely.
The dive computer switched to surface mode (surface and desaturation time) even though no switches were operated.	<ul style="list-style-type: none"> • A sudden change in altitude rank may cause the dive computer to start calculating residual nitrogen. • If you start diving when the computer is set this way, the dive will be considered part of a series of dives.
Nothing happens when I try to operate a switch.	<ul style="list-style-type: none"> • If this occurs after a dive, it may be because the water detection switch area is still wet. Wipe it dry and try again. • If the above does not apply, there may be a malfunction. • Send the dive computer to the Seac Diving Pro s.r.l for repair.
In dive plan mode , the no decompression limit is shown as a bar graph display. " - - -"	<ul style="list-style-type: none"> • This occurs when an out of measurement range warning has been output. The computer will reset itself automatically after 48 hours. • It may also occur when the altitude measurement exceeds 19,685 feet (6,000 meters), which causes the altitude rank symbols to "E". The display will return to normal when the altitude measurement is again below 19,685 feet (6,000 meters). • This is displayed when the altitude rank converts to a depth value that exceeds the maximum depth for NITROX diving. Change the altitude rank setting to check this.
The altitude mark symbols " E " when the dive computer is in surface mode .	<ul style="list-style-type: none"> • This occurs when the altitude measurement exceeds 6,000 meters. The display will return to normal when the altitude measurement is again below 19,685 feet (6,000 meters).
The dive computer switches to dive mode when at the surface.	<ul style="list-style-type: none"> • This can occur when there is a sudden change in air pressure (such as in an airplane) or when the water detection switch is wet. • Avoid touching the switch and keep it dry. Wipe off the water detection switch and wait about ten minutes. The display should then change to surface mode.

<p>The battery life was less than 7 years.</p>	<ul style="list-style-type: none"> • The 7 years battery life was estimated based on 50 one-hour dives per year, with one ten-seconds alarm output per dive. More frequent use of the computer or its alarms will shorten the battery life.
<p>The dive computer display is blank.</p>	<ul style="list-style-type: none"> • It may also mean that the battery level is low. Have the Seac diving pro s.r.l replace the battery. • If this problem persists even after the battery is replaced, there is a malfunction. • Send the dive computer to the Seac Diving Pro s.r.l for repair.

Mode flow chart



C : Water detection switch
DIVE MODE

